

Erratum: "Microwave measurement of the dielectric constant of $\text{Sr}_{0.5}\text{Ba}_{0.5}\text{TiO}_3$ ferroelectric thin films" [Appl. Phys. Lett. 62, 1845 (1993)]

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An arithmetic error in the calculation of the thickness for the SBT film was made. The correct thickness, determined from the elastic backscattering data, was $1.85\text{ }\mu\text{m}$ which is a factor of 4.6 larger than previously thought. After refitting the data with Eq. (4), the dielectric constant was found to be 4.3 times larger for the SBT thin films. The resulting dielectric constant is shown in the figure, which corresponds to Fig. 2 of the original manuscript, with an uncertainty of $\sim 10\%$. The maximum relative dielectric constant of approximately 1100 is comparable to that observed for bulk SBT. The dielectric constant of the thin films, however, retains a broader temperature dependence near the Curie temperature. The shapes of the curves in Fig. 3 are also unchanged and the magnitude of the y axis can be easily corrected by a 4.3 reduction of the values. To correct the applied fields computed for the original paper, one divides by 4.6. With this correction, a 50% modulation of the dielectric constant is achieved with an approximately 40 kV/cm field. This field is approximately 2 times larger than the field required in bulk SBT to achieve a 50% change in the dielectric constant.

We apologize for the mistake. The primary point of the letter, namely that ferroelectric thin films have properties that are potentially useful for microwave applications, is still valid. In the near future, we hope to present additional data that further support this conclusion.

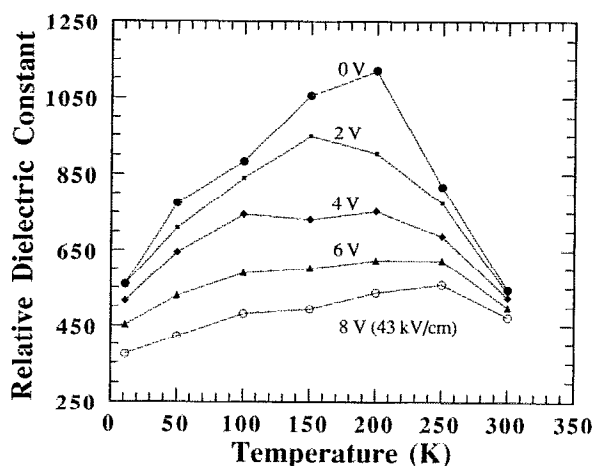


FIG. 2. Relative dielectric constant of the $\text{Sr}_{0.5}\text{Ba}_{0.5}\text{TiO}_3$ film as a function of temperature for several applied fields.